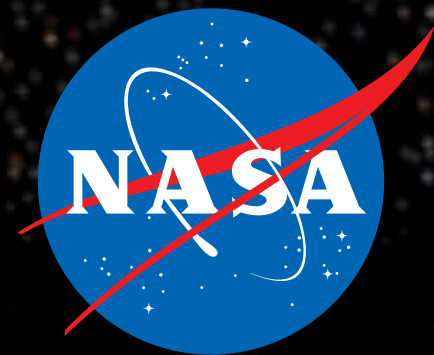


Space Shuttle Discovery,
March 7, 2011, as photographed from
the International Space Station.

National Aeronautics and
Space Administration



Space Shuttle: A Key to NASA's Space Transportation System

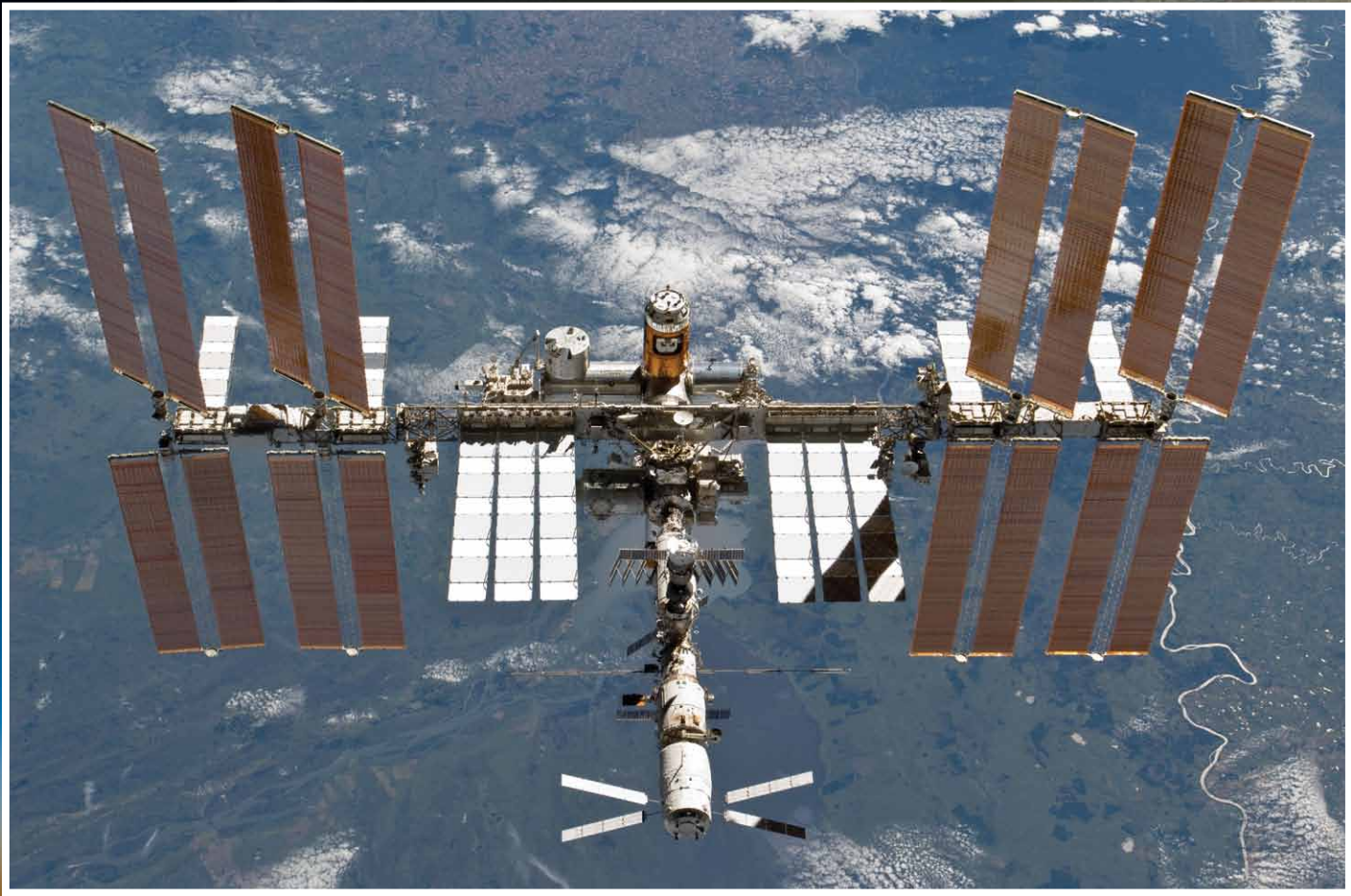
Following the spectacular successes of the Apollo program, NASA designed the Space Transportation System (STS), including the crew-tended Space Shuttle orbiter, to provide a reusable vehicle for launching heavy payloads, maintaining low Earth orbit, and returning to ground with a runway landing. The Shuttle made its first orbital flight in April 1981 and its last flight in July 2011. The manifests for the 135 flights were very diverse, from deploying planetary spacecraft and servicing the Hubble Space Telescope to construction of the International Space Station in low Earth orbit. The Shuttle program is centered at NASA's Johnson Space Center and Kennedy Space Center, but it has important NASA Goddard Space Flight Center contributions.



Space Shuttle Endeavour, making its
final landing at Kennedy Space Center,
June 1, 2011.



Astronaut Mary Cleave conducting an experiment
on Space Shuttle Atlantis in May 1989.



International Space Station Freedom, a laboratory dedicated to
humans living and working in Low Earth Orbit, March 7, 2011, as
photographed from Space Shuttle Discovery.



A rare event with two Space Shuttle
Orbiters (Atlantis and Endeavour)
simultaneously being prepared for
separate launches at Kennedy Space
Center, September 20, 2008.

Photo by Jack Pfaller

Space Shuttle Atlantis, July 8, 2011, lifting
off with its four-member crew on the
Shuttle program's final mission.

The edge of the Earth's atmosphere on
March 7, 2011, as photographed from the
Space Shuttle Discovery.

Some of the Women of Goddard Involved in the Space Shuttle Missions



Photo courtesy of NASA

MARY CLEAVE

ASTRONAUT & ENVIRONMENTAL ENGINEER

Twice flew on the Space Shuttle Atlantis, operating the robot arm on the Shuttle in 1985 and deploying the Magellan spacecraft to Venus from the Shuttle in 1989. While at Goddard, she was the Project Manager for the highly successful Earth-observing SeaWiFS satellite instrument.



Photo by Debra McCallum

MELISSA BLIZZARD

HUMAN SPACEFLIGHT MANAGER

Is responsible for providing overall direction and management of the Goddard Human Spaceflight Team. Her team oversees preparations for network support of day-to-day operations and provides technical guidance and problem resolution for all phases of Space Shuttle missions.



Photo by Megan Clark

ELIZABETH CLARK

NETWORK SUPPORT SPECIALIST

Ensures for each Shuttle mission that all requirements for telemetry, command, and tracking data communications through the Tracking Data and Relay Satellite (TDRS) and the Ground Network are met. She monitors the network data from pre-launch through post-landing, providing technical assistance.



Photo by Steve Graham

RUTH CHOLVIBUL

AEROSPACE ENGINEER

Worked on the Shuttle's Servicing Missions to the Hubble for over ten years as a thermal engineer, systems engineer, and deputy program manager. She provided analysis, launch integration, and mission operations support on equipment used to carry the Hubble components.



Photo by Mary Kay Kerr

ADRIANA APOLITO-BEVIS

SYSTEMS ENGINEER

Began her aerospace career as a systems engineer developing and integrating secondary payloads onto the Shuttle. She worked on the Get Away Special and Hitchhiker programs that were developed to take advantage of extra space on Shuttle missions, unused by the primary payloads.



BARBARA SCOTT

FLIGHT SOFTWARE SPECIALIST

Wrote software for the science payload on the third Space Shuttle mission (STS-3) and was on the operations support team for the Solar Max Repair Mission on STS-41C. She has worked with the Shuttle astronauts and in Mission Control during Shuttle missions.

Goddard
SPACE FLIGHT CENTER



ANNE KOSLOSKY

SYSTEMS ENGINEER

Began her involvement with Shuttle missions initially as the technical liaison for a Get Away Special experiment on STS-77. She later commanded the deployment of a small Department of Defense spacecraft, the Petite Amateur Navy Satellite (PANSAT), during the STS-95 mission.



Photo by Claire Parkinson

LOLA OLSEN

PROJECT MANAGER

Manages NASA's Global Change Master Directory, which provides links to access Space Shuttle photography and other Space Shuttle data sets. The Directory promotes the use of Shuttle data and numerous other Earth observation data sets by the global scientific community and other interested users.



Photo by Chris Gumm

BARBARA LAMBERT

TECHNICAL PHOTOGRAPHER

Supported payload processing operations at Kennedy Space Center for the Shuttle's Hubble Servicing Missions and monitored photographic imaging stations in the Payload Operations Control Center in Houston. She also worked with Shuttle astronauts during their training for the Hubble missions.



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